ARNAV KUMAR

📱 +1 (347) 277-6077 • 🌐 arnavkumar.com • GitHub: arnavk

✉ arnav@arnavkumar.com • in arnavkumar24 • 🐦 @_arnavkumar

Education

- **Carnegie Mellon University**, School of Computer Science   Pittsburgh, PA
  - Master of Science in Intelligent Information Systems   (Aug 2017 - Dec 2018)
  - Specializing in Information Retrieval (Project: Knowledge Acceleration with Dr. Jamie Callan)
    * Discover possible search paths and the concepts discussed therein, based on intial search query results.
  - Developing skills in Information Retrieval, Machine Learning and Natural Language Processing
- **Nanyang Technological University**, School of Computer Science and Engineering   Singapore
  - Bachelor of Engineering (First Class Honours) in Computer Science.   (Aug 2010 – Jun 2014)
  - Specialization in Intelligent Systems, Minor in Business.

Professional Experience

- **Zendesk, Inc.** - *Senior Software Engineer, Zendesk Chat (Backend/Platform)*, Singapore   (Jul 2016 - Aug 2017)
- **Zendesk, Inc.** - *Software Engineer, Zendesk Chat (Backend/Platform)*, Singapore   (Jul 2014 - Jul 2016)
  - As *Engineering Lead* for the internal **push-notification microservice** project, re-wrote session management logic, architected new systems and infrastructure to support robust push notification delivery.
  - As *Engineering Lead* for the internal microservice for **feature entitlement**, designed the underlying rule-engine, architected and led development for the service, serving ~10k RPS at peak.
  - Developed various iterations of the application that powers live chat, working on features like REST API for ongoing chats, support for concurrent sessions, low-level protocol enhancements etc.
  - Replaced legacy billing system by integrating with the shared Zendesk-wide billing service, followed by writing mechanisms to migrate existing customers to it en masse.
  - Wrote the **event framework** that produces product-wide events to Kafka. Some were piped via a pool of Logstash servers depending on importance and volume.
  - Made several improvements to the unit test suite: improvements to the test suite lifecycle, increased coverage and heavily reduced suite run-times with micro-optimizations.
  - *Miscellanous Responsibilites* - Hiring; mentoring; maintenance of dev environments, staging servers & CI setup. *Technologies Used* - Python, Django, Flask, Celery, Nose, JavaScript, Node, Redis & Redis Cluster, Memcached, Kafka, Logstash, MySQL, Docker, etc.
- **IBM Corporation** - *Software Engineering Intern*, Singapore   (May 2013 - Aug 2013)
- **IBM Corporation** - *Software Engineering Intern*, Singapore   (Jun 2012 - Dec 2012)
  - Built the fully-featured, UIWebView-based embedded browser for a mobile port of IBM Security Access Manager for Enterprise Single Sign-On, ISAM-ESSOm, for providing web single sign-on capabilities on the iOS platform.

Open Source Contributions (Selected)

- **TwitterCLDR** - Regular contributor to Twitter's open source JavaScript implementation of the ICU (International Components for Unicode) that uses the Common Locale Data Repository to format dates, plurals, and more. Implemented features such as Text Segmentation, Unicode Regex Parser, Rule-based number formatting etc.
- **raven-python** - Added per message capture-sampling and support for logging filters and exclusions for Flask.
- **txconnpool** - Added support to create a connection pool to a pool of servers rather than just 1.
- **blinker** - Added support for sending signals without propagating resulting exceptions and support for connecting via multiple objects in a single decorator.

Technical Skills

- Languages: Comptetent: Python. Familiar: Javascript, CoffeeScript, Java, Objective-C, and others.
- Technologies (misc.): Django, Flask, Celery, Nose, Node, Jasmine, Redis, Redis Cluster, Memcached, MySQL, Kafka, Docker, Logstash, Unix etc.